Application No.: Not Yet Assigned

Docket No.: 0020-5388PUS1

JC17 Rec'd PCT/PTO 27 JUN 2005

AMENDMENTS TO THE CLAIMS

Claim 1 (original): A condensed furan compound of the formula (I):

$$\begin{array}{c|c}
 & R^3 \\
 & N - X \\
 & N - X
\end{array}$$

$$\begin{array}{c}
 & (I) \\
 & A \\
 & Y
\end{array}$$

wherein, Ring:

$$\mathbb{N}$$

is

$$R^{2A}$$
 R^{2B}
 R^{2B}

Ring X is:

Y is an optionally substituted amino; an optionally substituted cycloalkyl; an optional substituted aryl; an optionally substituted saturated heterocyclic group; or an optionally substituted unsaturated heterocyclic group;

A is a single bond; an alkylene optionally substituted by oxo; an alkenylene; an alkenylidene; or an oxygen atom;

R^{1A}, R^{1B} are the same or different and each is hydrogen; a halogen; an alkyl; a haloalkyl; an alkoxy; cyano; nitro; or an optionally substituted amino; R^{1C} is hydrogen, an alkyl or a halogen;

R^{2A}, R^{2B} are the same or different and each is hydrogen; a halogen; an optionally substituted alkyl; an optionally substituted alkoxy; an optionally substituted amino; nitro; cyano; hydroxy; carboxy; an optionally substituted alkoxycarbonyl; an optionally substituted carbamoyl; a carbonyl substituted by an optionally substituted saturated heterocyclic group; an optionally

substituted saturated heterocyclic group; aryl; or an optionally substituted unsaturated heterocyclic group;

R³ is hydrogen or an alkyl; and

R⁴ is hydrogen or an alkyl,

or a pharmaceutically acceptable salt thereof.

Claim 2 (original): The condensed furan compound according to claim 1, wherein Ring:

is

wherein the symbols are the same as defined in claim 1, or a pharmaceutically acceptable salt thereof.

Claim 3 (original): The condensed furan compound according to claim 1 or 2, wherein Ring:

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is

$$R^{2A}$$
 R^{2B} R^{2B} R^{2B} R^{2B} R^{2B} R^{2B} R^{2B} R^{2B} R^{2B}

wherein the symbols are the same as defined in claim 1, or a pharmaceutically acceptable salt thereof.

Claim 4 (currently amended): The condensed furan compound according to any one of claims 1 to 3 claim 1, wherein Y is an optionally substituted cycloalkyl or an optionally substituted saturated heterocyclic group, or a pharmaceutically acceptable salt thereof.

Claim 5 (currently amended): The condensed furan compound according to any one of claims 1 to 4 claim 1, wherein the substituent in the definition of "optionally substituted cycloalkyl" for Y is a group selected from an optionally substituted alkyl; an optionally substituted carbamoyl; a carbonyl substituted by an optionally substituted heterocyclic group; an optionally substituted amino; and an optionally substituted saturated heterocyclic group, or a pharmaceutically acceptable salt thereof.

Claim 6 (currently amended): The condensed furan compound according to any one of claims 1 to 5 claim 1, wherein the substituent in the definition of "optionally substituted cycloalkyl" for Y is a group selected from: (1) an amino optionally substituted by a group selected from an optionally substituted acyl, an alkoxycarbonyl and an optionally substituted alkyl; (2) an aminoalkyl optionally substituted by a group selected from an optionally substituted acyl and an optionally substituted alkyl; (3) a carbamoyl optionally substituted by an optionally substituted alkyl; (4) a carbonyl substituted by a saturated heterocyclic group; and (5) an optionally substituted saturated heterocyclic group,

or a pharmaceutically acceptable salt thereof.

Claim 7 (original): The condensed furan compound according to claim 5 or 6, wherein the saturated heterocyclic group is a 4- to 7-membered saturated heterocyclic group containing 1 to 4 hetero atoms selected from the group consisting of nitrogen atom, oxygen atom and sulfur atom, or a pharmaceutically acceptable salt thereof.

Claim 8 (currently amended): The condensed furan compound according to any one of claims 5 to 7 claim 5, wherein the saturated heterocyclic group is a group selected from imidazolidinyl, pyrazolidinyl, piperidyl, piperidino,

piperazinyl, morpholinyl, morpholino, thiomorpholinyl, thiomorpholino, homopiperazinyl, homopiperidyl, homopiperidino and pyrrolidinyl, or a pharmaceutically acceptable salt thereof.

Claim 9 (currently amended): The condensed furan compound according to any one of claims 1 to 6 claim 1, wherein the substituent in the definition of "optionally substituted cycloalkyl" for Y is: (1) an amino optionally substituted by a group selected from acyl, alkoxycarbonyl, alkyl, aminoalkyl, alkylsubstituted aminoalkyl, alkoxycarbonylaminoalkyl and acylaminoalkyl; (2) an alkyl substituted by amino optionally substituted by alkyl; (3) a carbamoyl optionally mono- or di-substituted by alkyl or aminoalkyl which may be substituted by alkyl or aminoalkyl which may be substituted by alkyl; (4) a group selected from pyrrolidinylcarbonyl, piperidylcarbonyl, piperazinylcarbonyl, morpholinocarbonyl, homopiperidinylcarbonyl and homopiperazinylcarbonyl; or (5) a saturated heterocyclic group selected from pyrrolidinyl optionally substituted by oxo, piperidyl optionally substituted by oxo, piperazinyl optionally substituted by oxo, morpholino optionally substituted by oxo, homopiperidinyl optionally substituted by oxo, and homopiperazinyl optionally substituted by oxo, or a pharmaceutically acceptable salt thereof.

Claim 10 (currently amended): The condensed furan compound according to any one of claims 1 to 6 claim 1, wherein the substituent in the definition of "optionally substituted cycloalkyl" for Y is pyrrolidinyl optionally substituted by oxo; morpholino optionally substituted by oxo; dialkylcarbamoyl; pyrrolidinylcarbonyl; amino that is di-substituted by alkyl and acylaminoalkyl; or dialkylamino, or a pharmaceutically acceptable salt thereof.

Claim 11 (currently amended): The condensed furan compound according to any one of claims 1 to 3 claim 1, wherein Y is an aryl or unsaturated heterocyclic group substituted by an optionally substituted carbamoyl,

or a phrmaceutically acceptable salt thereof.

Claim 12 (currently amended): The condensed furan compound according to any one of claims 1 to 11 claim 1, wherein A is a single bond or methylene,

or a pharmaceutically acceptable salt thereof.

Claim 13 (currently amended): The condensed furan compound according to any one of claims 1 to 4 claim 1, wherein A is a single bond or

methylene, and Y is an unsaturated heterocyclic group or a saturated heterocyclic group optionally substituted by alkyl, or a pharmaceutically acceptable salt thereof.

Claim 14 (currently amended): The condensed furan compound according to any one of claims 1 to 3 claim 1, wherein A is tetramethylene, and Y is an optionally substituted saturated heterocyclic group, or a pharmaceutically acceptable salt thereof.

Claim 15 (currently amended): The condensed furan compound according to any one of claims 1 to 14 claim 1, wherein R^{1A}, R^{1B} are the same or different and each is hydrogen, a halogen or an alkyl, or a pharmaceutically acceptable salt thereof.

Claim 16 (currently amended): The condensed furan compound according to any one of claims 1 to 15 claim 1, wherein R^{2A}, R^{2B} are the same or different and each is hydrogen; a halogen; an optionally substituted alkyl; an optionally substituted alkoxy; an optionally substituted amino; cyano; carboxy; an alkoxycarbonyl; an optionally substituted carbamoyl; a carbonyl substituted by saturated heterocyclic group; or a saturated heterocyclic group, or a pharmaceutically acceptable salt thereof.

Claim 17 (original): The condensed furan compound according to claim 16, wherein the saturated heterocyclic group is a 4- to 7-membered saturated heterocyclic group containing 1 to 4 hetero atoms selected from the group consisting of nitrogen atom, oxygen atom and sulfur atom, or a pharmaceutically acceptable salt thereof.

Claim 18 (currently amended): The condensed furan compound according to any one of claims 1 to 17 claim 1, wherein R^{2A}, R^{2B} are the same or different and each is hydrogen, fluoro, chloro, bromo, methyl, hydroxymethyl, methoxy, amino, methylsulfonylamino, acetylamino, t-butoxycarbonylamino, dimethylamino, cyano, carboxy, methoxycarbonyl, ethoxycarbonyl, methoxy, ethoxy, isopropoxy, methoxyethoxy, dimethylcarbamoyl, N-methyl-N-(2-methoxyethyl)carbamoyl, pyrrolidinyl, pyrrolidinylcarbonyl morpholinocarbonyl or morpholino, or a pharmaceutically acceptable salt thereof.

Claim 19 (currently amended): The condensed furan compound according to any one of claims 1 to 18 claim 1, wherein R³ is hydrogen, or a pharmaceutically acceptable salt thereof.

Claim 20 (currently amended): The condensed furan compound according to any one of claims 1 to 19 claim 1, wherein R⁴ is hydrogen,

or a pharmaceutically acceptable salt thereof.

Claim 21 (currently amended): The condensed furan compound according to any one of claims 1 to 20 claim 1, wherein Ring X is

wherein the symbols are as defined in claim 1, or a pharmaceutically acceptable salt thereof.

Claim 22 (original): The condensed furan compound according to claim 21, wherein Ring X is

wherein the symbols are as defined in claims 1, or a pharmaceutically acceptable salt thereof.

Claim 23 (currently amended): The condensed furan compound according to any one of claims 1 to 22 claim 1, which is selected from the following compounds:

- (1) 5-amino-N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (2) 6-amino-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (3) N-(4-chlorophenyl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (4) N-(5-chloropyridin-2-yl)-5-[(methylsulfonyl)amino]-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (5) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-5-carboxylic acid,
- (6) N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-yl-cyclohexyl)carbonyl]amino}furo[3,2-c]pyridine-2-carboxamide,
- (7) N-(5-chloropyridin-2-yl)-5-(hydroxymethyl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (8) N-(5-chloropyridin-2-yl)-5-methoxy-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (9) N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-yl-cyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,

(10) N-(5-chloropyridin-2-yl)-5-methoxy-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,

- (11) N-(4-chlorophenyl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (12) 5-amino-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (13) 5-(acetylamino)-N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (14) N-(5-chloropyridin-2-yl)-5-fluoro-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (15) 5-chloro-N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (16) N-(5-chloropyridin-2-yl)-5-methyl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (17) N²-(5-chloropyridin-2-yl)-N⁵,N⁵-dimethyl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2,5-dicarboxamide,
- (18) 5-(acetylamino)-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (19) t-butyl (2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridin-6-yl)carbamate,

(20) N-(5-chloropyridin-2-yl)-5-[(methylsulfonyl)amino]-3-({[trans-4-(3-

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oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,

- (21) N-(4-chlorophenyl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)-cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (22) N-(5-chloropyridin-2-yl)-3-{[(1-pyridin-4-ylpiperidin-4-yl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (23) N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (24) t-butyl [2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridin-6-yl]carbamate,
- (25) 6-amino-N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (26) 6-amino-N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (27) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-5-carboxylic acid,
- (28) N²-(5-chloropyridin-2-yl)-N⁵,N⁵-dimethyl-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2,5-dicarboxamide,

(29) N-(5-chloropyridin-2-yl)-5-(morpholin-4-ylcarbonyl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,

- (30) t-butyl (2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridin-5-yl)carbamate,
- (31) N-(5-chloropyridin-2-yl)-5-methyl-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (32) methyl 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-5-carboxylate,
- (33) 5-bromo-N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (34) N-(5-chloropyridin-2-yl)-5-[(methylsulfonyl)amino]-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (35) N-(4-chlorophenyl)-3-({[trans-4-(dimethylamino)cyclohexyl]-carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (36) N-(5-chloropyridin-2-yl)-5-cyano-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (37) N-(5-chloropyridin-2-yl)-5-fluoro-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (38) N²-(5-chloropyridin-2-yl)-N⁵-(2-methoxyethyl)-N⁵-methyl-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2,5-dicarboxamide,

(39) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,

- (40) N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)-5-(pyrrolidin-1-ylcarbonyl)furo[3,2-b]pyridine-2-carboxamide,
- (41) t-butyl [2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridin-5-yl]carbamate,
- (42) 5-bromo-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (43) N-(5-chloropyridin-2-yl)-5-(morpholin-4-ylcarbonyl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (44) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)-5-methoxyfuro[3,2-b]pyridine-2-carboxamide,
- (45) 5-chloro-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (46) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-5-carboxylic acid,
- (47) N-(5-chloropyridin-2-yl)-5-cyano-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,

(48) N-(5-chloropyridin-2-yl)-5-cyano-3-({[trans-4-(3-oxomorpholin-4yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,

- (49) N-(5-chloropyridin-2-yl)-5-(hydroxymethyl)-3-({[trans-4-(2oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2carboxamide,
- (50) N-(5-chloropyridin-2-yl)-5-methoxy-3-({[trans-4-(2-oxopyrrolidin-1yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (51) N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1yl)cyclohexyl]carbonyl}amino)-5-(pyrrolidin-1-ylcarbonyl)furo[3,2-b]pyridine-2carboxamide,
- (52) N-(5-chloropyridin-2-yl)-5-methyl-3-({[trans-4-(2-oxopyrrolidin-1yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (53) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)cyclohexyl]carbonyl}amino)-5-methylfuro[3,2-b]pyridine-2-carboxamide,
- 5-chloro-N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- N²-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)cyclohexyl]carbonyl}amino)-N⁵,N⁵-dimethylfuro[3,2-b]pyridine-2,5dicarboxamide,
- methyl 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(3oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-5-carboxylate,

- (57) N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (58) 5-amino-N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (59) N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (60) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-{[5-(3-oxomorpholin-4-yl)pentanoyl]amino}furo[3,2-b]pyridine-5-carboxylic acid,
- (61) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (62) 6-chloro-N-(5-chloropyridin-2-yl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (63) 5-chloro-N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (64) N²-(5-chloropyridin-2-yl)-N⁵,N⁵-dimethyl-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2,5-dicarboxamide,
- (65) 6-(acetylamino)-N-(5-chloropyridin-2-yl)-3-({[trans-4-(pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (66) t-butyl [2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridin-6-yl]carbamate,

(67) 6-chloro-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,

- (68) N-(4-methylphenyl)-3-({[trans-4-(3-oxomorpholin-4-yl)-cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (69) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-6-carboxylic acid,
- (70) N-(5-chloropyridin-2-yl)-3-{[5-(3-oxomorpholin-4-yl)pentanoyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (71) 5-(acetylamino)-N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (72) N-(4-chlorophenyl)-3-{[(trans-4-morpholin-4-ylcyclohexyl)-carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (73) 5-bromo-N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (74) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)furo[2,3-b]pyridine-2-carboxamide,
- (75) 3-[({trans-4-[[3-(acetylamino)propyl](methyl)amino]-cyclohexyl}carbonyl)amino]-N-(5-chloropyridin-2-yl)furo[3,2-b]pyridine-2-carboxamide,
- (76) trans-N'-(2-{[(5-chloropyridin-2-yl)amino]carbonyl}furo[3,2-b]pyridin-3-yl)-N,N-dimethylcyclohexane-1,4-dicarboxamide,

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- (77) N-(5-chloropyridin-2-yl)-3-({[trans-4-(pyrrolidin-1-yl-carbonyl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (78) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-[({trans-4-[(dimethylamino)carbonyl]cyclohexyl}carbonyl)amino]furo[3,2-b]pyridine-5-carboxylic acid,
- (79) methyl 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(pyrrolidin-1-ylcarbonyl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-5-carboxylate,
- (80) methyl 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-[({trans-4-[(dimethylamino)carbonyl]cyclohexyl}carbonyl)amino]furo[3,2-b]pyridine-5-carboxylate,
- (81) 2-{[(5-chloropyridin-2-yl)amino]carbonyl}-3-({[trans-4-(pyrrolidin-1-ylcarbonyl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-5-carboxylic acid,
- (82) N²-(5-chloropyridin-2-yl)-3-[({trans-4-[(dimethylamino)-carbonyl]cyclohexyl}carbonyl)amino]-N⁵-(2-methoxyethyl)-N⁵-methylfuro[3,2-b]pyridine-2,5-dicarboxamide,
- $(83) \quad N^2-(5-chloropyridin-2-yl)-N^5-(2-methoxyethyl)-N^5-methyl-3-(\{[trans-4-(pyrrolidin-1-ylcarbonyl)cyclohexyl]carbonyl\}amino)furo [3,2-b]pyridine-2,5-dicarboxamide,$
- (84) N-(5-chloropyridin-2-yl)-5-pyrrolidin-1-yl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,

(85) N-(5-chloropyridin-2-yl)-5-morpholin-4-yl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,

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- (86) N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)-5-pyrrolidin-1-ylfuro[3,2-b]pyridine-2-carboxamide,
- (87) N-(5-chloropyridin-2-yl)-5-(dimethylamino)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (88) N-(5-chloropyridin-2-yl)-5-morpholin-4-yl-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (89) N-(5-chloropyridin-2-yl)-4-(2-methoxyethoxy)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-c]pyridine-2-carboxamide,
- (90) N-(5-chloropyridin-2-yl)-5-(2-methoxyethoxy)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (91) N-(5-chloropyridin-2-yl)-5-(pyrrolidin-1-ylcarbonyl)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (92) N-(5-chloropyridin-2-yl)-4-(2-methoxyethoxy)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide,

- (93) N-(5-chloropyridin-2-yl)-4-methoxy-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-c]pyridine-2-carboxamide,
- (94) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)-5-pyrrolidin-1-ylfuro[3,2-b]pyridine-2-carboxamide,
- (95) N²-(5-chloropyridin-2-yl)-N⁵-(2-methoxyethyl)-N⁵-methyl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2,5-dicarboxamide,
- (96) N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide,
- (97) N-(5-chloropyridin-2-yl)-5-(dimethylamino)-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (98) N-1H-indol-6-yl-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (99) N-(5-chloropyridin-2-yl)-4-methoxy-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide,
- (100) N-(5-chloropyridin-2-yl)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)-5-pyrrolidin-1-ylfuro[3,2-b]pyridine-2-carboxamide,
- (101) N-(5-chloropyridin-2-yl)-5-isopropoxy-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,
- (102) N-(5-chloropyridin-2-yl)-5-isopropoxy-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,

- (103) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)-5-(2-methoxyethoxy)furo[3,2-b]pyridine-2-carboxamide,
- (104) N-(5-chloropyridin-2-yl)-5-morpholin-4-yl-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (105) N-(5-chloropyridin-2-yl)-5-(dimethylamino)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (106) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)-5-morpholin-4-ylfuro[3,2-b]pyridine-2-carboxamide,
- (107) N-(5-chloropyridin-2-yl)-5-(2-methoxyethoxy)-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (108) N-(5-chloropyridin-2-yl)-5-(dimethylamino)-3-({[trans-4-(dimethylamino)cyclohexyl]carbonyl}amino)furo[3,2-b]pyridine-2-carboxamide,
- (109) N-(5-chloropyridin-2-yl)-3-({[trans-4-(dimethylamino)-cyclohexyl]carbonyl}amino)-5-isopropoxyfuro[3,2-b]pyridine-2-carboxamide,
- (110) N-1H-indol-6-yl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-b]pyridine-2-carboxamide,

(111) N-(5-chloropyridin-2-yl)-4-cyano-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-c]pyridine-2-carboxamide,

- (112) N-(5-chloropyridin-2-yl)-4-methyl-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide,
- (113) N-(5-chloropyridin-2-yl)-4-cyano-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide,
- (114) N-(5-chloropyridin-2-yl)-4-methyl-3-({[trans-4-(2-oxopyrrolidin-1-yl)cyclohyexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide,
- (115) 4-chloro-N-(5-chloropyridin-2-yl)-3-({[trans-4-(3-oxomorpholin-4-yl)cyclohexyl]carbonyl}amino)furo[3,2-c]pyridine-2-carboxamide, and
- (116) N-(5-chloropyridin-2-yl)-4-methyl-3-{[(trans-4-pyrrolidin-1-ylcyclohexyl)carbonyl]amino}furo[3,2-c]pyridine-2-carboxamide, or a pharmaceutically acceptable salt thereof.

Claim 24 (original): A compound of the formula (II):

wherein the symbols are as defined in claim 1, or a salt thereof.

Claim 25 (original): A compound of the formula (VI):

Application No.: Not Yet Assigned Docket No.: 0020-5388PUS1

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wherein the symbols are as defined in claim 1, or a salt thereof.

Claim 26 (original): A compound of the formula (IV):

$$\begin{array}{c|c}
 & O & O - R \\
 & O & O -$$

wherein R is hydrogen, C₁₋₄ alkyl or a carboxy-protecting group, and the other symbols are as defined in claim 1, or a salt thereof.

Claim 27 (original): A compound of the formula (IX):

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wherein R is hydrogen, C_{1-4} alkyl or a carboxy-protecting group, and the other symbols are as defined in claim 1, or a salt thereof.